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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,401	09/23/2003	James B. Carpenter	58973US002	2520

32692 7590 10/31/2005

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EXAMINER	
CHIEM, DINH D	
ART UNIT	PAPER NUMBER
2883	

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/668,401	CARPENTER ET AL.	
	Examiner	Art Unit	
	Erin D. Chiem	2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 August 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17 and 19-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17 and 19-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to the amendment filed on August 10, 2005. Claims 18, 26-27 are cancelled and claims 1-17, and 19-25 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5, 10-17, 19-22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patterson (US Patent 5,102,212) in view of the Specification, Novack et al. (US Re 36,146), Matweb.com, and Corrosion Source.

Patterson teaches an optical fiber gripping device comprising a sheet of material having a first and second member (Fig. 1-4) hingedly attached at a first end of each of the members (claim 12); and a gripping region that includes first and second gripping portions disposed on first and second inner portions of each of said members, respectively to apply a substantially even distribution of force to an outer perimeter of an optical fiber disposed in said gripping region (Fig. 15). The gripping portion comprises a substantially ductile material (col. 4, line 54) having grooves (Fig. 2, 5, 12, 15). And as seen in Fig. 12, 15, and 16, the grooves are semicircular shape. Regarding claim 5, the limitation is a description of the operation of a gripping or clamping device and such disclosure of the operation is described throughout Patterson patent.

Fig. 8, 12,15-16 shows the multiple slots on the inner sides of the gripping device and furthermore, Fig. 8 shows the gripping device used in a connector. Furthermore, pertaining to claim 13, Patterson teaches elements for making butt splices in two optical fibers (col. 3, line 34), a housing to support the first and second ends in contact (col. 6, line 67- col. 7, line 1), also known as a splice, wherein the housing applies a substantially even distribution of force to an outer perimeter of at least a portion of the first and second optical fibers (col. 7, line 6-27).

However, Patterson does not teach the optical fiber is softer than the malleable material of the gripping portion.

Novack teaches an optical fiber comprises a polymer-based coating affixed to the cladding for the purpose of protecting the glass fiber from environmental and mechanical abuse (col. 1, lines 19-26). According to Applicant's Specification on page 5, lines 5-9, the Applicant teaches the malleable material that is used in the product is an aluminum alloy commonly known as "3003" and this alloy has a hardness on the Brinell scale of between 23 and 32. On the same page, the Applicant further teaches a list of suitable polymers that may be used as a protective coating for optical fibers, such as polyvinylidene fluoride. On MatWeb.com polyvinylidene fluoride has a hardness value of 75 on a Rockwell M scale. And the Corrosion Source reference is a conversion table of Rockwell scale relative to the Brinell scale. And it is very obvious that the hardness of polyvinylidene fluoride is extremely low in comparison to the malleable aluminum alloy "3003." Thus, the Examiner has established Applicant's amended limitation is inherent the characteristics of polyvinylidene fluoride and aluminum alloy. Furthermore, the **motivation** for coating the optical fiber with a polymer-based coating is to protect the fiber from environmental and mechanical abuse.

Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patterson. Patterson teaches an optical fiber gripping device comprising a sheet of material having first and second members (Fig. 1-4) hingedly attached at a first end of each of the members (claim 12); and a gripping region that includes first and second gripping portions disposed on first and second inner portions of each of said members, respectively to apply a substantially even distribution of force to an outer perimeter of an optical fiber disposed in said gripping region (Fig. 15). The gripping portion comprises a substantially ductile material (col. 4, line 54) having grooves (Fig. 2, 5, 12, 15). And as seen in Fig. 12, 15, and 16, the grooves are semicircular shape. Regarding claim 5, the limitation is a description of the operation of a gripping or clamping device and such disclosure of the operation is described throughout Patterson patent. However, Patterson does not expressly teach the specific range of outer diameter of the device or at which point of the circumference of the fiber that the splicing tool make contact to.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to provide a splicing tool having means to fit around the circumference of the fiber such that splicing can be performed with respect to the splicing tool disclosed by Patterson since it has been held that discovery of optimum ranges within prior art general conditions is obvious. In re Aller et al., 105 USPQ 233.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Patterson in view of Calvet et al. (US 4675136 A).

Patterson teaches an optical fiber gripping device comprising a sheet of material having a first and second member (Fig. 1-4) hingedly attached at a first end of each of the members (claim 12); and a gripping region that includes first and second gripping portions disposed on first and

second inner portions of each of said members, respectively to apply a substantially even distribution of force to an outer perimeter of an optical fiber disposed in said gripping region (Fig. 15). The gripping portion comprises a substantially ductile material (col. 4, line 54) having grooves (Fig. 2, 5, 12, 15). And as seen in Fig. 12, 15, and 16, the grooves are semicircular shape. Regarding claim 5, the limitation is a description of the operation of a gripping or clamping device and such disclosure of the operation is described throughout Patterson patent. Fig. 8, 12,15-16 shows the multiple slots on the inner sides of the gripping device and furthermore, Fig. 8 shows the gripping device used in a connector. Furthermore, Patterson teaches elements for making butt splices in two optical fibers (col. 3, line 34), a housing to support the first and second ends in contact (col. 6, line 67- col. 7, line 1), also known as a splice, wherein the housing applies a substantially even distribution of force to an outer perimeter of at least a portion of the first and second optical fibers (col. 7, line 6-27).

Calvet et al. teach butt splicing of two plastic optical fibers in Fig. 4 for the purpose of linking two plastic optical fibers together in applications that do not require high quality glass fibers to reduce cost.

Since Patterson and Calvert et al. are both from the same field of endeavor, the purpose disclosed by Calvert et al. would have been recognized in the pertinent art of Patterson.

It would have been obvious at the time the invention as made to a person having ordinary skill in the art to realize that a splicing tool, such as one taught by Patter, is meant to splice various types of fibers together.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Patterson in view of Wang et al. (US 6471417 B1).

Patterson teaches an optical fiber gripping device comprising a sheet of material having first and second members (Fig. 1-4) hingedly attached at a first end of each of the members (claim 12); and a gripping region that includes first and second gripping portions disposed on first and second inner portions of each of said members, respectively to apply a substantially even distribution of force to an outer perimeter of an optical fiber disposed in said gripping region (Fig. 15). The gripping portion comprises a substantially ductile material (col. 4, line 54) having grooves (Fig. 2, 5, 12, 15). And as seen in Fig. 12, 15, and 16, the grooves are semicircular shape. Regarding claim 5, the limitation is a description of the operation of a gripping or clamping device and such disclosure of the operation is described throughout Patterson patent. Fig. 8, 12,15-16 shows the multiple slots on the inner sides of the gripping device and furthermore, Fig. 8 shows the gripping device used in a connector. Furthermore, Patterson teaches elements for making butt splices in two optical fibers (col. 3, line 34), a housing to support the first and second ends in contact (col. 6, line 67- col. 7, line 1), also known as a splice, wherein the housing applies a substantially even distribution of force to an outer perimeter of at least a portion of the first and second optical fibers (col. 7, line 6-27). Furthermore, Patterson teaches materials used for the gripping members is softer than the glass of the fiber such that when pressure is placed on the fiber to butt splice the fibers together will no damage the glass fiber and cause unwanted transmission loss. And Patterson also accounted for optical fiber manufacturing size variation. The ductile material on the gripping members will compress and allow the tool to grip two substantially similarly sized fibers, but are not exactly the same circumference.

However, Patterson does not teach an optical fiber splice comprising at least one TECS fiber.

Wang et al. indirectly disclose that TECS requires splicing (col. 3, line 23 – 28) for the purpose of linking TECS fibers together in various applications.

Since Patterson and Wang et al. are both from the same field of endeavor, the purpose disclosed by Wang et al. would have been recognized in the pertinent art of Patterson.

It would have been obvious at the time the invention as made to a person having ordinary skill in the art to realize that a splicing tool is meant to splice various types of fibers together.

Response to Arguments

Applicant's arguments with respect to claims 1-17 and 19-25 with the support of the Affidavit under 37 CFR § 1.132 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

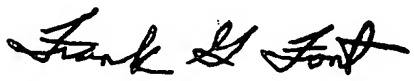
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erin D. Chiem whose telephone number is (571) 272-3102. The examiner can normally be reached on Monday - Thursday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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